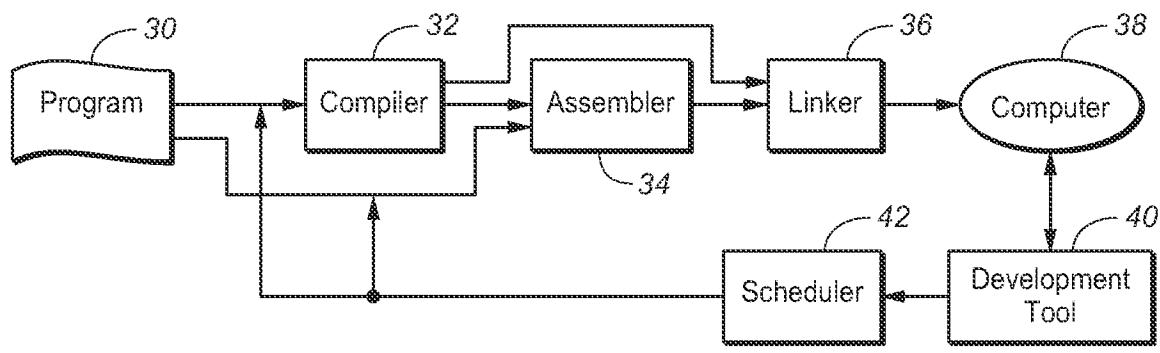
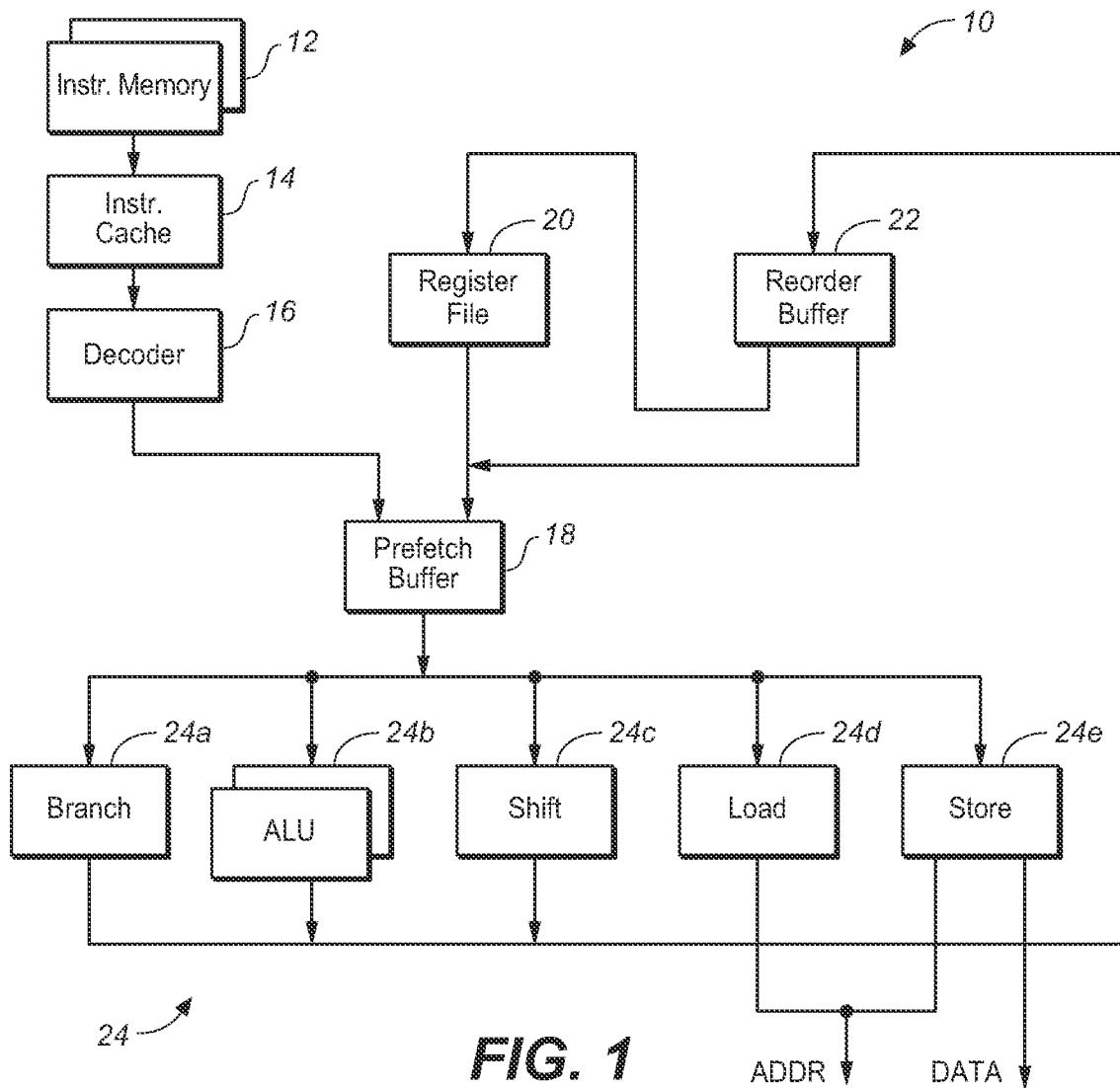


REPLACEMENT SHEET

1 / 5



REPLACEMENT SHEET

2 / 5

`*bp = (*bp & rm[offset]) | ((cd<<offset) & mask) <-- 50`

```

1: const    tmp1,mask           ;load mask
2: consth   tmp1,mask
3: sll      tmp2,cd,offset    ;cd<<offset
4: and     tmp2,tmp1,tmp2     ;(cd<<offset) & mask
5: const    tmp1,_rm          ;base address rm
6: consth   tmp1,_rm
7: add     tmp1,tmp1,offset   ;address of rm[offset]
8: load    tmp1,(tmp1)        ;rm[offset]
9: load    bp,(&bp)           ;*bp
10: and    tmp1,bp,tmp1       ;*bp & rm[offset]
11: or     tmp1,tmp1,tmp2     ;final expression
12: store   tmp1,(&bp)         ;assign *bp

```

} 52

Decode				Execute					Writeback		Cycle
I0	I1	I2	I3	ALU1	ALU2	SHF	LS	BRN	R1	R2	
1:const	2:consth	3:sll	4:and								1
5:const	6:consth	7:add	8:load	1:const		3:sll					2
9:load	10:and	11:or	12:store		2:consth					1 3	3
				4:and	5:const						4
				6:consth							5
					7:add						6
						8:load					7
							9:load				8
				10:and							9
					11:or						10
							12:store				11
											12

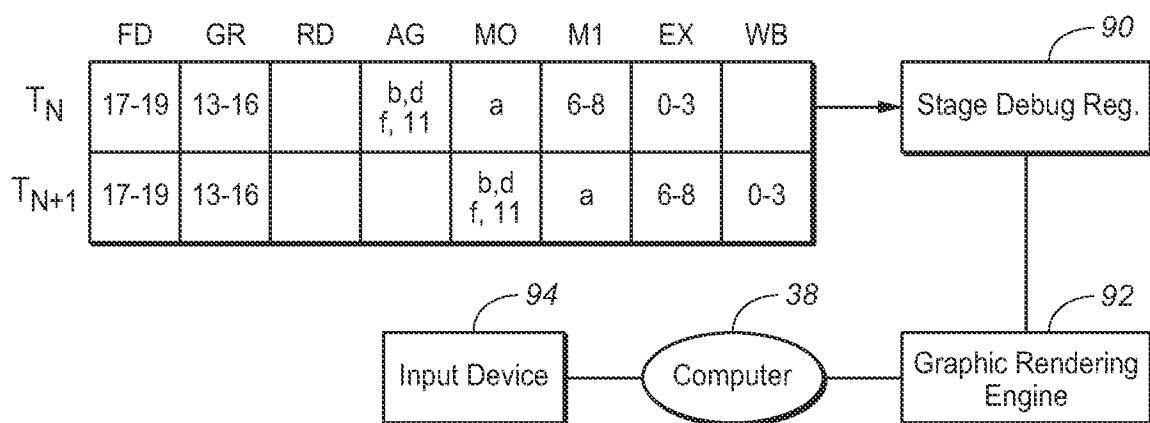
FIG. 3

REPLACEMENT SHEET

3 / 5

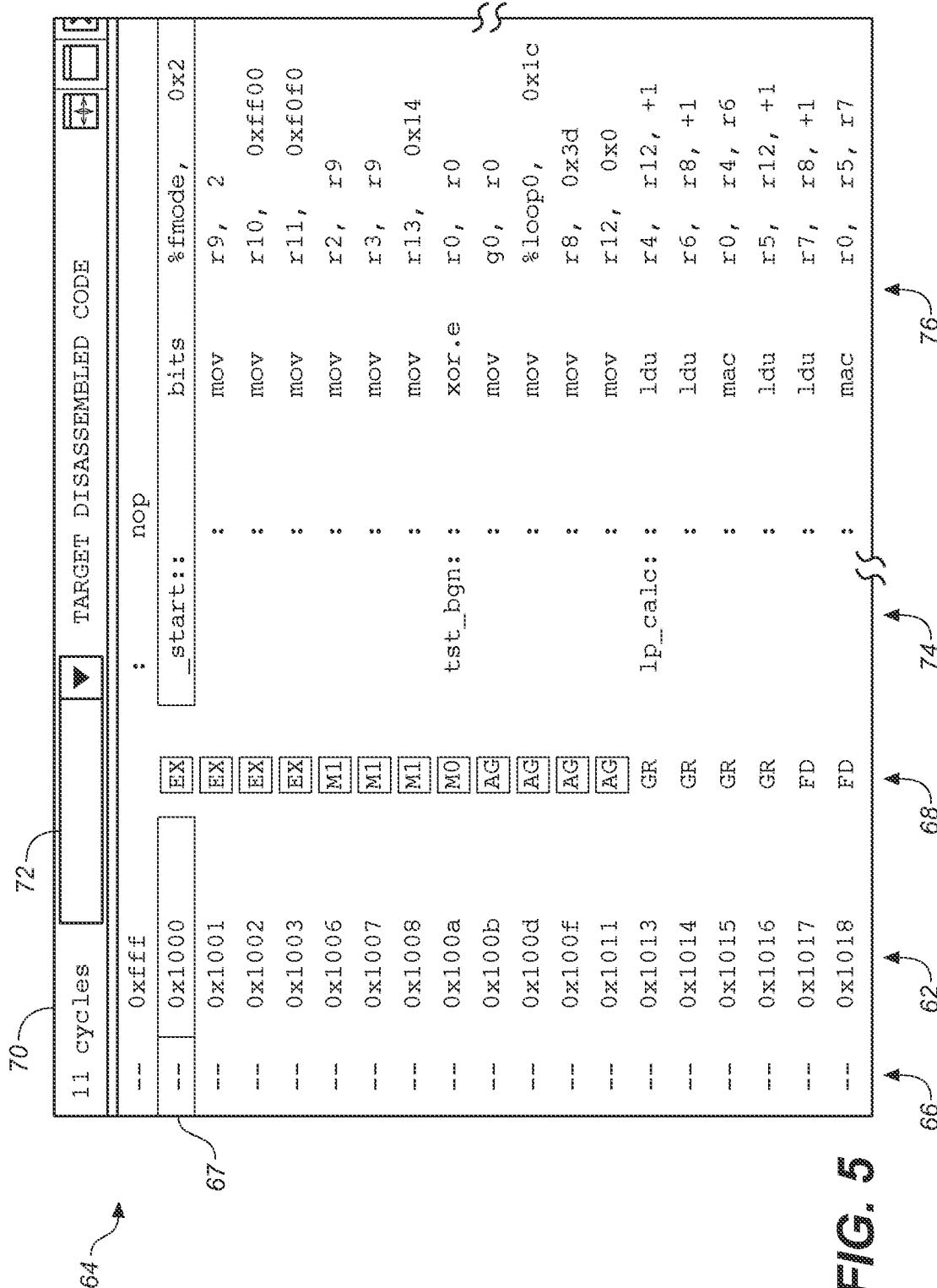
Stage	Issue 1	Issue 2	Issue 3	Issue 4
Write Back	None	None	None	None
Execute	0x1000	0x1001	0x1002	0x1003
Memory 1	0x1006	0x1007	0x1008	None
Memory 0	0x100A	None	None	None
Address Generation	0x100B	0x100D	0x100F	0x1011
Read Data	None	None	None	None
Grouping	0x1013	0x1014	0x1015	0x1016
Fetch/Decode	0x1017	0x1018	0x1019	None

60

FIG. 4**FIG. 7**

REPLACEMENT SHEET

4 / 5



REPLACEMENT SHEET

5 / 5

469 cycles		TARGET DISASSEMBLED CODE	
--	0x1e0	:	std
--	0x1e1	GR	ldd r2, a7, 0x5
--	0x1e2	GR	mov a6, a7
--	0x1e3	GR	add a6, 3
--	0x1e4	FD	ldd r4, a6
--	0x1e5	WBFD	mov.e a1, r2
--	0x1e6	M1FD	mov.e a0, r4
--	0x1e7	MQFD	ld r6, a0
--	0x1e8	MO	st r6, a1
--	0x1e9	AG	ld r6, a1
--	0x1ea	AG	iadd.e r4, 1
--	0x1ec	AG	std r4, a6
--	0x1ed	AG	iadd.e r2, 1
--	0x1ef	RD	std r2, a7, 0x1
--	0x1f0	RD	cmp r6, 0
--	0x1f1	GR	0x1e1
--	0x1f2		ldd a0, a7, 0x5
--	0x1f3		add a7, 6
--	0x1f4		ret
--	0x1f5		write_sdsp:: pushd r10, a7

80 ~

FIG. 6